

### REMARKS

Claims 1-9 are presented for consideration, with Claims 1, 5 and 9 being independent.

The specification and abstract have been reviewed and amended to correct minor informalities and improve their idiomatic English form. In addition, the independent claims have been amended to further distinguish Applicants' invention from the cited art. In addition, Claims 6-9 have been added to provide an additional scope of protection.

Applicants are submitting concurrently herewith a Submission of Replacement Sheet of Drawing, in which Figure 8 is labelled as "PRIOR ART." Approval of the Replacement Sheet is respectfully requested. The Submission is submitted to overcome the objection to the drawings as set forth in paragraph 1 of the Office Action.

Claims 1-5 stand rejected under 35 U.S.C. §103 as allegedly being obvious over the admitted prior art in view of Muraji '797. This rejection is respectfully traversed.

Claim 1 of Applicants' invention relates to a projection type display device comprised of a plurality of image display elements, each of which modulates light rays in accordance with an image signal, and a color synthesizing optical element comprising a dichroic film including a gradient film in which one of its thickness and refractive index varies in a substantially horizontal direction, with the color synthesizing optical element synthesizing the modulated light rays. In addition, a projection optical system projects the synthesized light rays onto a projection surface, and a signal processing circuit corrects the image signal such that brightness irregularity in a substantially vertical direction of an image projected by the projection optical system is reduced or cancelled.

Claim 5 relates to a projection type image display apparatus that includes a plurality of image display elements, each of which modulates light rays in a substantially rectangular region having a long side extending in a first direction and a short side extending in a second direction in accordance with an image signal, and a color synthesizing optical element comprising a dichroic film including a gradient film in which one of its thickness and refractive index varies in the first direction, with the color synthesizing optical element synthesizing the light rays modulated by the plurality of image display elements. A projection optical system projects the synthesized light rays onto a projection surface to display a substantially rectangular image having a long side extending in the first direction and a short side extending in the second direction, and a signal processing circuit corrects the image signal such that brightness irregularity in the second direction of the image is reduced or cancelled.

In accordance with Applicants' claimed invention, a dichroic film including a gradient film has a thickness or refractive index that varies in a substantially horizontal (or first) direction and synthesizes the modulated light rays, and a signal processing circuit corrects the image signal so that brightness irregularity in a substantially vertical (or second) direction is reduced or cancelled. In this way, the image signal can be corrected in an effective and economical manner. Support for the changes to Claims 1 and 5 can be found, for example, in paragraph [0059] of the specification.

Applicants' prior art Figure 8 shows a projection type image display device that includes a plurality of image display elements, a color synthesizing optical element and a projection optical system. A dichroic prism 211 is provided for color synthesizing modulated light.

The Office Action acknowledges that the image display device in prior art Figure 8 does not teach a storage circuit for storing data used to correct brightness irregularity and a brightness irregularity correcting circuit.

The secondary citation to Muraji relates to a projection type image display apparatus and was cited to compensate for the deficiencies in prior art Figure 8. In Muraji, a video signal correction 69 includes look-up tables 83 and 84 in an attempt to correct the non-uniformity of luminance.

It is respectfully submitted, however, that it would not have been obvious to modify prior art Figure 8 in view of Muraji to provide an image display device that uses a combination of a color synthesizing optical element and a processing circuit to correct the image signal as set forth in Applicants' claim. The display devices in prior art Figure 8 and Muraji use different techniques to correct image data and do not teach or suggest combining such techniques together. Accordingly, reconsideration and withdrawal of the rejection of Claims 1-5 under 35 U.S.C. §103 is respectfully requested.

Therefore, it is submitted that Applicants' invention as set forth in independent Claims 1 and 5 is patentable over the cited art. In addition, dependent Claims 2-4 set forth additional features of Applicants' invention.

Claims 6-9 are also submitted to be patentable over the cited art. In Claim 6, a projection type image display device includes a plurality of image display elements, a color synthesizing optical element which comprises a dichroic film including a gradient film in which one of its thickness and refractive index varies in a predetermined direction, with the color synthesizing optical element synthesizing the modulated light rays, and a projection optical system which projects the synthesized light rays onto a projection surface. In addition, a signal

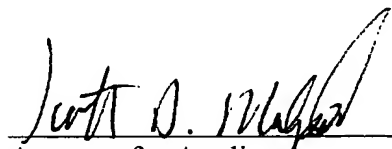
processing circuit corrects the image signal by one of each pixel and each pixel area such that brightness irregularity in the predetermined direction of an image projected is reduced or cancelled.

As will be appreciated, in Claim 6 an image signal is corrected in a predetermined direction by both a signal processing circuit and a color synthesizing optical element. This feature, among others, is not taught or suggested by the cited art. Support for Claim 6 can be found, for example, in paragraph [0058] of the specification.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

  
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